AMENDMENTS TO THE CLAIMS

Please amend the claims as indicated below. The language being added is underlined ("__") and the language being deleted contains a strikethrough ("—").

LISTING OF CLAIMS

1-4. (Canceled)

5. (Currently Amended) ~~The wireless transceiver of claim 1~~ A wireless transceiver, comprising:

a plurality of antennas;

an antenna switch coupled to said plurality of antennas; and

a media access controller, coupled to control said antenna switch, that determines when to switch to another antenna based on packet error rate, wherein said media access controller comprises: CRC check logic that determines an error in a received packet; a timer that determines a predetermined amount of time after a packet is transmitted; a memory that stores at least one packet error count; and antenna select logic, coupled to said CRC check logic, said timer and said memory, that counts received packet errors using said CRC check logic, that counts transmit packet errors using said timer, and that controls switching to another antenna.

6. (Original) The wireless transceiver of claim 5, further comprising: said memory storing at least one antenna select value; an antenna switch controller,

coupled to said memory and to control said antenna switch, that selects an antenna based on said at least one antenna select value; and said antenna select logic modifying said at least one antenna select value to control antenna switching.

7. (Original) An antenna diversity system for a wireless transceiver having a plurality of antennas, comprising:

an antenna switch for selecting from among the plurality of antennas;

at least one counter that stores a packet error count;

at least one packet error detector that detects a packet communication error; and

antenna select logic, coupled to control said antenna switch, said at least one counter and said at least one packet error detector, that increments said packet error count when a packet communication error is detected, that compares the packet error count with a threshold value to determine whether a threshold condition is met, and that switches the antenna when said threshold condition is met.

8. (Original) The antenna diversity system of claim 7, wherein: said at least one counter comprises a receive error counter that stores a receive error count; and wherein said at least one packet error detector comprises cyclical redundancy code (CRC) check logic.

9. (Original) The antenna diversity system of claim 8, wherein said antenna select logic resets said receive error count if a unicast packet is received without a CRC error.

10. (Original) The antenna diversity system of claim 7, wherein: said at least one counter comprises a transmit retry counter that stores a transmit retry count; and wherein said at least one packet error detector comprises a timer that determines whether an acknowledge packet is received within a predetermined amount of time.

11. (Original) The antenna diversity system of claim 10, wherein said antenna select logic resets said transmit retry count if an acknowledge packet is received within said predetermined amount of time.

12. (Original) The antenna diversity system of claim 7, wherein: said at least one packet error detector comprises cyclical redundancy code (CRC) check logic and a timer that determines whether an acknowledge packet is received within a predetermined amount of time; and wherein said antenna select logic increments said packet error count when a unicast packet is received with a CRC error or if an acknowledge packet is not received within said predetermined amount of time after transmitting a unicast packet.

13. (Original) The antenna diversity system of claim 7, further comprising:

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a memory for storing a receive antenna select value and a transmit antenna select value;

an antenna switch controller coupled to control said antenna switch and said memory;

said at least one counter comprising a receive error counter that stores a receive error count and a transmit retry counter that stores a transmit retry count;

said at least one packet error detector comprising cyclical redundancy code (CRC) check logic and a timer that determines whether an acknowledge packet is received within a predetermined amount of time; wherein said antenna select logic increments said receive error count when a unicast packet is received with a CRC error and increments said transmit retry count if an acknowledge packet is not received within said predetermined amount of time after transmitting a unicast packet; and

wherein said antenna select logic modifies said receive antenna select value if said receive error count meets a first threshold and modifies said transmit antenna select value if said transmit retry count meets a second threshold.

14. (Original) The antenna diversity system of claim 13, wherein said antenna select logic resets said receive error count if a unicast packet is received without a CRC error and resets said transmit retry count if an acknowledge packet is received within said predetermined amount of time.

15. (Original) A method of selecting from among a plurality of antennas of a transceiver, comprising:

counting packet errors;

comparing a packet error count with a threshold value to determine a threshold condition;

switching to a different antenna if the threshold condition is met; and

resetting the packet error count when the threshold condition is met.

16. (Original) The method of claim 15, wherein said counting packet errors comprises:

determining whether a received unicast packet has an error; and

incrementing the packet error count if the received unicast packet has an error.

17. (Original) The method of claim 16, further comprising resetting the packet error count if a unicast packet is received without an error.

18. (Original) The method of claim 16, wherein said determining comprises determining whether the received unicast packet has a cyclic redundancy code (CRC) error.

19. (Original) The method of claim 15, wherein said counting packet errors comprises:

determining whether a transmitted unicast packet is acknowledged within a predetermined amount of time; and

incrementing the packet error count if the transmitted unicast packet is not acknowledged in time.

20. (Original) The method of claim 19, further comprising resetting the packet error count if a transmitted unicast packet is acknowledged within the predetermined amount of time.

21. (Original) The method of claim 15, wherein said counting packet errors comprises:

incrementing the packet error count if a received unicast packet has an error; and

incrementing the packet error count if a transmitted unicast packet is not acknowledged in time.

22. (Original) The method of claim 21, further comprising resetting the packet error count if a unicast packet is received without an error or if a transmitted unicast packet is acknowledged within the predetermined amount of time.

23. (Original) The method of claim 15, further comprising:

using a first selected antenna for transmitting packets;

using a second selected antenna for receiving packets;

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said counting packet errors comprising:

incrementing a received packet error count if a unicast packet is received with an error; and incrementing a retry error count if a transmitted unicast packet is not acknowledged within a predetermined amount of time;

said comparing comprising: comparing the received packet error count with a first threshold value to determine a first threshold condition; and comparing the retry error count with a second threshold value to determine a second threshold condition;

said switching comprising: switching the first selected antenna to different antenna for receiving packets if the first threshold condition is met; and switching the second selected antenna to different antenna for transmitting packets if the second threshold condition is met; and

said resetting comprising: resetting the received packet error count if the first threshold condition is met; and resetting the retry error count if the second threshold condition is met.

24. (Original) The method of claim 23, further comprising using the first selected antenna for detecting acknowledgment of a transmitted packet.

25. (Original) The method of claim 23, further comprising:

resetting the received packet error count if a unicast packet is received without an error; and

resetting the retry error count if a transmitted unicast packet is acknowledged within the predetermined amount of time.

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26. (Original) The method of claim 15, further comprising:

selecting a corresponding antenna for each of one or more remote stations for transmitting unicast packets;

counting unicast transmit retry errors for each of the one or more remote stations;

switching the selected antenna for transmitting unicast packets to a remote station if a corresponding retry error count meets a threshold condition; and

resetting the retry error count of a corresponding remote station if the threshold condition is met for that remote station.